

DECLARED DISTANCES WORKING GROUP

FAA AERONAUTICAL CHARTING FORUM

1302 MEETING OCTOBER 30 & 31



10/30/2013

Declared Distances Working Group
Aeronautical Charting Forum – CG 1302

1

History

ACF CG 07-01-192: Usable Runway Lengths for Takeoff and Landing.

- Differing methods of reporting of usable runway length for takeoff & landing.
 - Runway length.
 - Runway length & threshold displacement.
 - Declared Distances.
- Temporary reductions in usable runway not reflected in revised declared distances.

History

09-01-215: Reporting and Depiction of Stopways.

- Submitted by the DDWG.
- Seeking to address issues with the reporting & depiction of stopways.
 - Designation of area beyond the end of a runway as an “overrun” (military term not defined by the CFRs) verses “stopway”, which is defined in CFR part 1.
 - Depiction of stopway on airport diagram/airport sketch without supporting A/FD entry.



ADDRESSING THE ISSUES

CERTALERT 09-05

- Published March 3, 2009.
- Issued by FAA Airports Safety & Operations Division (AAS-300)
- Coordinated with DDWG.
- Applied to airports certificated to part 139.
- Runways certificated for use under part 139 required to report declared distances.
- Declared Distances must be verified by FAA.

CERTALERT

ADVISORY CAUTIONARY NON-DIRECTIVE

AIRPORT SAFETY AND OPERATIONS DIVISION AAS-300
FOR INFORMATION, CONTACT Ken Langert, AAS-300, (202) 493-4529

DATE:	03/06/09	No. 09-05
TO:	Airport Operators, FAA Airport Certification Safety Inspectors, and FAA Project Managers	
TOPIC:	Reporting Declared Distances to Aeronautical Information Services	

Purpose:

This CERTALERT provides guidance to airport operators, Airport Certification Safety Inspectors (ACSI), and FAA Project Managers for the electronic submission of declared distances data to FAA Aeronautical Information Services (AIS) for certificated Part 139 airports. Declared distances are the distances the airport owner declares available for use in meeting an airplane's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements. At Part 139 airports declared distance data must be listed for all runway ends that are specified as Part 139 use. An example of a runway with declared distances is provided in the attached Appendix.

ACSI and Project Managers:

1. At Part 139 airports declared distance data must be listed for all runway ends that are specified as Part 139 use. Please note that data element numbers 60-63 will be equal to element 31 (Length) in cases where a runway does not have displaced thresholds, stopways, or clearway, and have standard runway safety areas, runway object free areas, and runway protection zones.
2. When the runway(s) distances available for takeoff and landing (i.e., takeoff run available (TORA), takeoff distance available (TODA), accelerate-stop distance available (ASDA), and

Aeronautical Information Manual

Section 4-3-6,

Use of Runways/Declared Distances

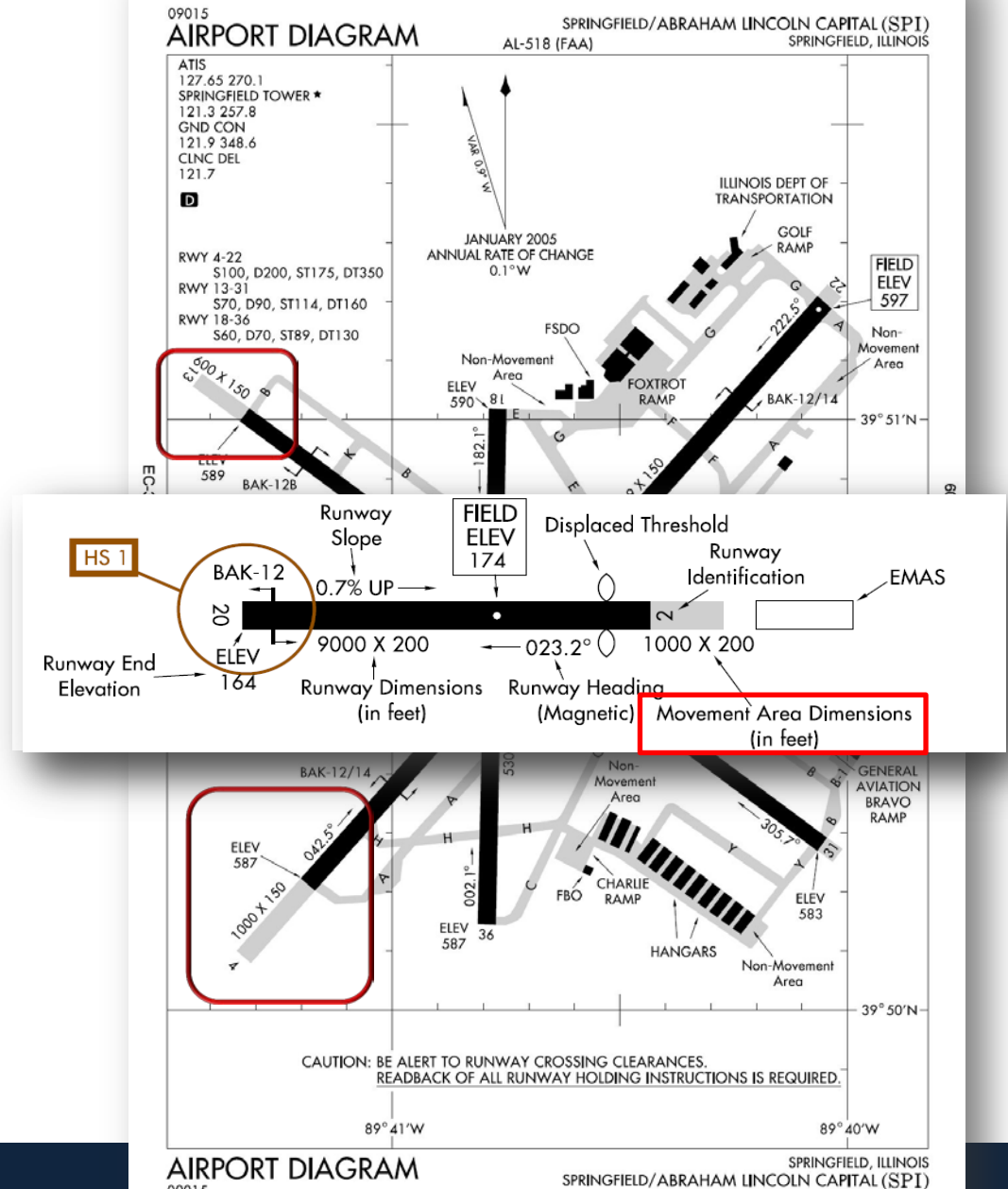
- Published 10 March 2011.
- Drafted by the DDWG.
- Approved by FAA Airports for inclusion in the AIM.
- Furnished:
 - Definitions of declared distances.
 - Guidance regarding airplane performance planning.
 - Guidance on their operational use.
 - New graphics illustrating declared distances.

In addition, the DDWG assisted with revised guidance provided in AIM 4-3-10 regarding declared distances and intersection takeoffs.



Depiction of Stopway on the Airport Diagram

- US Government Terminal Procedures Publication (TPP) Legend depicted the dimensioned area beyond the end of the runway as a stopway. However, these areas were not necessarily stopways designated and maintained by the airport operator (ref: 14 CFR part 1).
- NACO updated the IACC Specification, removing reference to “Stopway” and replacing it with “Movement Area”.



AC 150-5300-13A

Airport Design

- Published on September 28, 2012.
- Revised & expanded the guidance on declared distances.
- Expanded the reporting requirements for declared distance:
 - All part 139 certificated airports,
 - All international airports (as listed in the US AIP), and
 - Airports where the application of design standards result in less the full length of the runway available for takeoff & landing. This includes runways with a displaced threshold.

f. Notification. The clearway and stopway lengths, if provided, and declared distances (TORA, TODA, ASDA, and LDA) will be provided by the airport owner for inclusion in the Airport Master Record (FAA Form 5010), A/FD (and in the Aeronautical Information Publication, for international airports) for each operational runway direction. Declared distances must be published for all international airports and Part 139 certificated airports, even when the distances are simply equal to the runway length in both directions. When the threshold is sited for small airplanes, report LDA as “LDA for airplanes of 12,500 lbs (5700 kg) or less maximum certificated takeoff weight.”



U.S. Department
of Transportation

Federal Aviation
Administration

Advisory Circular

Subject: Airport Design

Date: 9/28/2012

AC No: AC 150/5300-13A

Initiated by: AAS-100

Change:

1. What is the purpose of this advisory circular (AC)?

This AC contains the Federal Aviation Administration's (FAA) standards and recommendations for airport design.

2. Does this AC cancel any prior ACs?

AC 150/5300-13, Airport Design, dated September 29, 1989, is canceled.

3. To whom does this AC apply?

The FAA recommends the standards and recommendations in this AC for use in the design of civil airports. In general, use of this AC is not mandatory. The standards and recommendations contained in this AC may be used by certificated airports to satisfy specific requirements of Title 14 Code of Federal Regulations (CFR) Part 139, Certification of Airports, subparts C (Airport Certification Manual) and D (Operations). Use of this AC is mandatory for all projects funded with federal grant monies through the Airport Improvement Program (AIP) and/or with revenue from the Passenger Facility Charges (PFC) Program. See Grant Assurance No. 34, Policies, Standards, and Specifications, and PFC Assurance No. 9, Standards and Specifications.

4. Are there any related documents?

Related documents to this AC are indicated in paragraph 108.

5. What are the principal changes in this AC?

This AC was substantially revised to fully incorporate all previous Changes to AC 150/5300-13, as well as new standards and technical requirements. This document was reformatted to simplify the presentation of the principal changes. Users should review the principal changes.

FAA Order 7930.2N

Notices to Airmen (NOTAM)

- Published August 22, 2013
(Effective By GENOT - October 4, 2013)
- Expanded instructions for changes to usable runway lengths and declared distances.
- When a runway condition restricts or precludes use of any portion of runway resulting in a change in declared distances, publish revised declared distances in the NOTAM.
- Issue a NOTAM reciprocal runway if so affected.



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

ORDER
JO 7930.2N

Effective Date:
August 22, 2013

SUBJ: Notices to Airmen (NOTAM)

8/22/13

JO 7930.2N

EXAMPLES-

/TYS TYS TWY C CLSD 1309041800-PERM
/ICT MEJ RWY 17/35 CLSD 1310122330-PERM

4. Operational limitations on the use of any portion of a runway, a taxiway, a ramp, an apron or a waterway. Weight bearing capacity of a runway can be changed only by authorization of the Manager, Airports Division (appropriate region).

EXAMPLE-

/BNA M54 RWY 18/36 CLSD TO JET ACFT
1309131300-1309132000EST

NOTE-

Runways 18 and 36 are closed to jet aircraft.

EXAMPLE-

/BIG BIG RWY 9/27 CLSD TO ACFT MORE THAN
13500LB 1309131300-1309132000EST

NOTE-

(a) When a runway condition restricts or precludes the use of any portion of a runway resulting in a change to the declared distances, include the published take-off run available (TORA), take-off distance available (TODA), accelerated stop distance available (ASDA), and landing distance available (LDA) in the NOTAM. Ensure that a second NOTAM is originated for the reciprocal runway with all declared distances if any value has changed. Declared distances can only be authorized by the FAA Office of Airport Safety and Standards, Airport Design Division, AAS-100.

EXAMPLES-

/MKC MKC RWY 19 THR DISPLACED 300FT NOT
STD MARKING. DECLARED DISTANCES: TORA 6827
TODA 6827 ASDA 6827 LDA 6527.
130601150300-1307141600EST

EXAMPLES-

**!MKC MKC RWY 19 THR DISPLACED 300FT NOT
STD MARKING. DECLARED DISTANCES: TORA 6827
TODA 6827 ASDA 6827 LDA 6527.
130601150300-1307141600EST**

**!MKC MKC RWY 1 DECLARED DISTANCES: TORA
6827 TODA 6827 ASDA 6527 LDA 6527.
130601150300-1307141600EST**

/CLT CLT RWY 5 CLSD TO LDG ACFT 1306110300 -
206112100EST

/PDX PDX RWY 3 CLSD TO DEPARTING ACFT
1306110300-1306112100EST

/DAY H7 RWY 8/26 CLSD TO TGL
1309131300-1309132000EST

5. Changes to usable runway length and declared distances.

7002 LDA 7002 RWY 23 TORA 7002 TODA 7002 ASDA
7002 LDA 7002. 1306110300-1306112100EST

NOTE-

Construction on Runway 5 requires 500 feet to be closed to protect a construction area thus changing declared distances to Runways 5 and 25.

EXAMPLE-

/MEM MEM RWY 9/27 WEST 500FT CLSD FOR TKOF.
DECLARED DISTANCES: RWY 9 TORA 8446 TODA
8446 ASDA 8446 LDA 8446 RWY 27 TORA 8946 TODA

Movement Area NOTAMs

5-1-3




AGENDA ITEM RECOMMENDATIONS

07-01-192: Usable Runway Lengths for Takeoff and Landing

Recommendation #1:

- The FAA should adopt a consistent methodology for the reporting of usable runway lengths for takeoff and landing. It is strongly recommended that declared distances (ASDA, TORA, TODA and LDA) be used uniformly to report all usable runway lengths for takeoff and landing. These terms are already defined in the Aeronautical Information Manual, are used and understood internationally, and are readily applied to the FAR 25 transport aircraft performance regulations as well as operator performance regulations contained in 14 CFR 91.605, FAR 121 Subpart I, and FAR 135 Subpart I.

Actions:

- Revised AC 150/5300-13A concerning the reporting of declared distances on runways.
- US Government TPP Legend identifies an airport with runways that have declared distances using the  symbol.
- AIM section 4-3-6 provides guidance on runways that do not publish declared distances. These distances are assumed to be equal to the physical length of the runway, or the case of LDA length remaining from the displaced threshold to the end of the runway.

DDWG Assessment:

- Actions acceptable to address recommendation.

07-01-192: Usable Runway Lengths for Takeoff and Landing

Recommendation #2:

- Any runway with less than full pavement length available should report declared distances (ASDA, TORA, TODA, and LDA). Reporting of displaced thresholds should be retained for informational purposes only. Establishment of a displaced threshold or other restriction on usable runway length should require the completion of the declared distance reporting blocks of the FAA 5010 Form. This information should then be published in the A/FD and included on appropriate aeronautical charts.

Action:

- FAA Airports Engineering provided the following response regarding publication of declared distances on runways with a displaced threshold (ref AC 150/5300-13A) :

Thank you for consulting with our group. The answer is Yes. When the threshold is displaced the Declared Distance for the runway as a result of this displacement will need to be published / updated

If you have further questions please call.

Respectfully,

Khalil E. Kodsi, P.E. PMP
Airports Engineering, AAS-100
Federal Aviation Administration

DDWG Assessment:

- Action acceptable to address recommendation.

07-01-192: Usable Runway Lengths for Takeoff and Landing

Recommendation #3:

- NOTAMS describing temporary changes in runway length should use declared distance format.

Action:

- FAA revised JO 7930.2N . Updated guidance on changes to a runway's usable length & declared distances.
- On runways without published declared distances, changes that preclude the use of any portion of the runway from being used would equally affect all declared distances for that runway,
 - i.e. a 500' closure would reduce each of the assumed, unpublished declared distances by 500' (ref: AIM 4-3-6 C 2)

DDWG Assessment:

- Action acceptable to address recommendation.

09-01-215: Reporting and Depiction of Stopways

Recommendations:

1. Ensure that operators of Part 139 certificated airports are following the requirements in AC 150/5300-13 concerning the designation of a stopway and providing associated declared distances for any runway with a stopway. The DDWG believes that AAS-300's recently released CertAlert 09-05 should aid in reminding Part 139 airport operators concerning this reporting requirement, however additional guidance/instruction to the regional Airport District Office's emphasizing this reporting requirement may be necessary.
2. During required inspections of Part 139 Airports, request that Airport Certification Safety Inspectors review the NACO Airport Diagram, the Airport/Facility Directory entry, and runway data furnished by the airport operator for accuracy and for conformity to the reporting requirements of AC 150-5300-13. Any irregularities or discrepancies should be brought to the attention of the airport operator and/or the appropriate Government agencies for resolution.
3. During airport inspections, review A/FD Airport Remarks for inappropriate instructions, limitations, or restrictions on the use of runway or stopway that are inconsistent with the other reported runway data, (i.e. declared distances).

Actions:

- AC 150/5300-13A, Airport Design clarifies the requirement to report of declared distance.
- FAA established Airport's GIS website to support requirements of AC 150/5300-18A, General Guidance And Specifications For Submission Of Aeronautical Surveys To NGS Field Data Collection And Geographic Information System (GIS) Standards
- GIS website reducing the number of runway attribute errors, including declared distances.

DDWG Assessment:

- Action acceptable to address recommendation.

09-01-215: Reporting and Depiction of Stopways

Recommendations:

4. When publication of a partial runway closure in the A/FD becomes necessary, revised and publish new declared distances for that runway.
5. Explore options to ensure information and depiction of a stopway in NACO end-user publications are in agreement. Options may include cross-verifying stopway/declared distance data/depiction between the NACO Airport Diagram and the A/FD entry for the same airport. When runway data discrepancies are found, report them to appropriate agency for resolution..
6. Explore option of adding stopway data validation capability to FAA's Airports GIS web-based airport source data collection program. Such a data validation capability would require entry of corresponding declared distances on a runway where a stopway data has been entered.

Actions:

- FAA revised JO 7930.2N NOTAMS, addressing changes to declared distances when any portion of runway is no longer usable.
- Changes to the IACC specifications addressed the depiction of stopway dimensions on the TPP Airport Diagram.
- GIS website supporting AC 150/5300-18A will reduce data collection errors of runway attributes, including declared distances.
- AC 150/5300-18A requires that the airport sponsor must submit safety critical data must be submitted for approval by FAA and/or NGS. This includes changes to runway length, stopway and clearway lengths, and declared distances.

DDWG Assessment:

- Actions acceptable to address recommendation.

DDWG Final Report

- Meeting held October 24, 2013.
- Consensus that aforementioned actions address the recommendations of 07-01-192 and 09-01-215. No further actions required.
- DDWG recommends closure of these two ACF-CG agenda items.
- DDWG will conclude its work with its report at the 1302 ACF-CG
- DDWG will hand-off other activities related to pilot/operator guidance & training to the Transport Airplane Performance Planning (TAPP) WG.



**Our Thanks To Everyone Who Contributed To
The Declared Distances Working Group**